

A Large Hiatal Hernia Mimicking Presentation of Acute Coronary Syndrome

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Abstract Although the incidence of hiatal hernias increases with age, respiratory and cardiac symptoms caused by hiatal hernias remain uncommon. A large hiatal hernia with intrathoracic herniation of abdominal contents can clinically mimic presentation of acute coronary syndrome (ACS), impair physical capacity and possibly increase BNP (B-Type Natriuretic Peptide) levels. We report a rare case of a 78-year-old female who presented with typical cardiac chest pain and was found to have a symptomatic large hiatal hernia.

Keywords: Hiatal Hernia, intrathoracic herniation, gastroesophageal junction

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1. Introduction

Although the incidence of hiatal hernias increases with age, respiratory and cardiac symptoms caused by hiatal hernias remain uncommon. A large hiatal hernia with intrathoracic herniation of abdominal contents can clinically mimic presentation of acute coronary syndrome (ACS), impair physical capacity and possibly increase BNP (B-Type Natriuretic Peptide) levels [1]. We report a rare case of a 78-year-old female who presented with typical cardiac chest pain and was found to have a symptomatic large hiatal hernia.

2. Case Presentation

A 78 years old female with the past medical history of parkinsonism, depression, hypertension, hyperlipidemia, diabetes mellitus and gastritis, presented to the emergency department with a sudden onset of intermittent, substernal, crushing chest pain of 7/10 intensity, radiating to her left arm, alleviated by nitroglycerin and associated with diaphoresis and multiple episodes of non-bilious, non-bloody vomiting. The pain started at home after she had her regular breakfast. She denied fever, cough, shortness of breath or abdominal pain. Clinical examination was significant for mild epigastric tenderness. The chest pain met criteria for typical anginal chest pain. For that reason, the patient was admitted to rule out acute coronary syndrome. An electrocardiogram (EKG) on admission showed normal sinus rhythm with no ST or T

wave changes. Serial EKGs were unchanged. Three sets of troponins were negative. Workup including complete blood count, comprehensive metabolic panel and thyroid stimulating hormone levels were normal. A transthoracic echocardiogram showed normal biventricular function with no significant valvular pathology. Chest radiograph revealed a large hiatal hernia which was confirmed by thoraco-abdominal CT scan. The patient refused surgical intervention and agreed to symptomatic medical treatment with proton pump inhibitors and antiemetics.

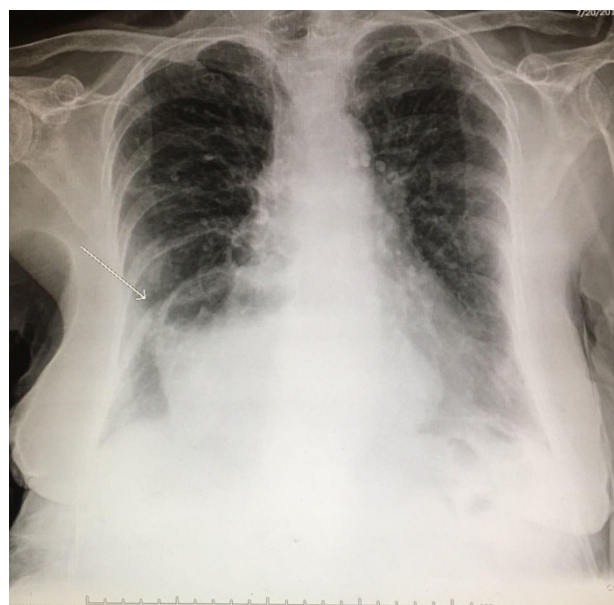


Figure 1. Chest X-rays: Posteroanterior view. White arrow pointing towards hiatal hernia

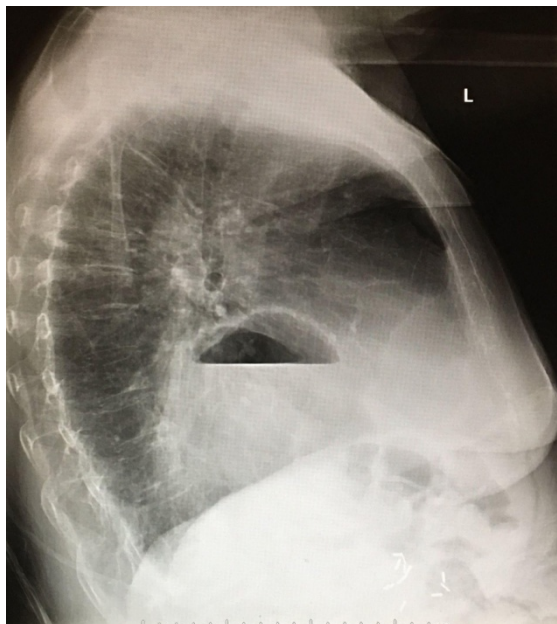


Figure 2. Lateral view. Obvious air-fluid level seen in hiatal hernia

3. Discussion

Hiatal Hernia can be either sliding (Type I) or paraesophageal (Type II-IV). The latter is uncommon (5-10% of cases) and can further be classified into class II to class IV according to its severity. In type I, gastroesophageal junction (GEJ) moves up into the chest. In type II, some part of the stomach rolls upwards in the chest through hiatus but GEJ stays at its place. Type III is a combination of both types I and II. In type IV, abdominal organs other than the stomach can also herniate into the chest. [2,3,4,5] Hiatal hernia can present with a wide spectrum of symptoms including nausea, vomiting, epigastric pain, dysphagia or symptoms similar to gastroesophageal reflux disease (GERD). Studies have shown that advanced stages of hiatal hernia may present with either atypical or typical chest pain. Paraesophageal hernia should be included in differential diagnosis when assessing a patient with ACS like presentation. Complications of hiatal hernia include recurrent aspiration pneumonias, gastrointestinal bleeding, obstruction, gastric volvulus and perforation. [6]

Surgical treatment is recommended for symptomatic Type III or Type IV hiatal hernias, especially if complicated. For symptomatic sliding hernias, medical management of gastroesophageal reflux (GERD) is the first line treatment. Medical management consists of proton pump inhibitors or H2 receptor blockers. As hiatal hernia symptoms can mimic acute coronary syndrome, it is important to differentiate both from each other. Serial cardiac enzymes and EKGs can help rule out acute coronary syndrome. In addition, cardiac imaging such as transthoracic echocardiogram can be helpful for further evaluation.

4. Conclusion

Large hiatal hernias can present with typical chest pain and mimic acute coronary syndrome. Detailed history, physical examination and appropriate imaging can help to diagnose hiatal hernias in patients presenting with chest pain. Treatment varies from medical management to surgical intervention.

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